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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,691	10/27/2003	Shuichiro Sugimoto	244285US0CONT	2040
22850	7590	09/15/2004		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER REDDICK, MARIE L				
ART UNIT		PAPER NUMBER		
1713				

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/692,691	Applicant(s) SUGIMOTO ET AL.	
	Examiner Judy M. Reddick	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/27/03 & 01/28/04.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-10 is/are rejected.
7) ☒ Claim(s) 1, 7 & 10 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/27/03;01/28/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statements filed 10/27/03 & 01/28/04 have been considered and scanned into the application file.

Claim Objections

3. Claims 1, 7 & 10 are objected to because of the following informalities: In claim 1 @ lines 15 & 17 & claim 7 @ line 3, It is suggested that "Formula" be used in lieu of "formula" so as to maintain claim language consistency; In claim 10 @ line 2, it is suggested that "an" be inserted before "emulsion" so as to engender claim language clarity. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - A) The recited "polymerization unit"(all occurrences) per claim 1 constitutes indefinite subject matter as per it not being readily ascertainable as to how such further limits the antecedently recited "copolymer". It is suggested that applicant adopt the use of "polymerized" in lieu of "polymerization".

B) The recited formula "Rf-Q-OCOCR=CH₂" per claim 8 constitutes indefinite subject matter as per the absence of a definition for the moiety "R".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 898 011 A1(Shimada et al), alone(1-3 & 8-10), and further in combination with Ito et al(U.S. 5,578,688, (4-7)).

Shimada et al disclose water and oil repellent compositions defined basically as containing, as an effective component, a copolymer comprising polymeric units (a), (b) and at least one member selected from (c) and (d) wherein (a) is polymeric units of a (meth)acrylate having a polyfluoroalkyl group(1 (1)), (b) is polymeric units of 2-isocyanate ethyl (meth)acrylate with the isocyanate group blocked with a blocking agent such as methyl ethyl ketoxime (9), phenol, alcohol, lactam, etc.(1 (4)), (c) is polymeric units of vinyl chloride and (d) is polymeric units of an alkyl (meth)acrylate wherein the alkyl group is preferably a C3-20 linear, branched or cycloalkyl group such as t-butyl (meth)acrylate, n-butyl (meth)acrylate, octadecyl (meth)acrylate, hexadecyl (meth)acrylate and stearyl methacrylate(1 (2) & (3)). See the Abstract & page 2, paragraph [0008]. Shimada et al further specifically teach (page 3 paragraph [0024]) that the copolymer can be derived from polymeric units (a), (b) and (d). Shimada et al further specifically teach that in addition to the above-mentioned polymeric units, the copolymer can contain other polymeric units such as ethylene, vinyl acetate, etc. so as enhance various properties such as water and oil repellency, adhesion, flexibility, antifouling, etc. (page 3, paragraph [0026] and page 4, paragraph [0027]). Shimada et al further specifically teach that the proportions of the respective polymeric units in the copolymer are preferably from 9.9 to 90 parts by weight of the polymeric units (a), from 0.1 to 30 parts by weight of the polymeric units (b) and from 9.9 to 90 parts by weight in total of the polymeric units (c) and/or the polymeric units (d) per 100 parts by weight of the copolymer (page 4, paragraph [0028] & [0029]). Shimada et al further specifically teach that the copolymer can be prepared by an emulsion polymerization technique (10) wherein the polymerizable monomers and emulsifier are introduced into a medium of water or solvent(propylene glycol, dipropylene glycol & tripropylene glycol) or a mixture of water/water-soluble solvent to emulsify the polymerizable monomers followed by polymerization(page 4, paragraph [0030]-[0032]). Shimada et al further specifically teach that the water and oil repellent composition contains the above copolymer and a medium such as water or water/solvent mixture wherein the amount of copolymer in the composition is preferably from 1 to 50 wt. %, with the understanding that the amount of copolymer may be optionally changed (page 4, paragraph

[0035]). Shimada et al further exemplify a copolymer formed by polymerizing at least an acrylate having a polyfluoroalkyl group(8), stearyl methacrylate and a methyl ethyl ketoxime adduct of 2-isocyanate ethyl methacrylate(MIE) via an emulsion polymerization technique in an aqueous medium(35.0 g) and in the presence of a nonionic surfactant, Emulgen 920-a polyoxyethylene alkylaryl ether(1.6 g, Run 3, the contents of components in Run 3 coupled with the contents stipulated @ page 4, paragraph [0035] appear to meet the ratio of polymer/aqueous medium/surfactant, as claimed).

Ito et al teach a polymer exhibiting water and oil repellency and comprising an antifouling agent wherein said polymer comprises polymeric units derived from a (meth)acrylate containing a polyfluoroalkyl group, polymeric units derived from a (meth)acrylate containing a blocked isocyanate group, polymeric units derived from a (meth)acrylate containing a polyoxyalkylene chain(the Abstract and cols 1-3). Ito et al further specifically teach that the polymer may be obtained by a method which involves emulsifying a monomer mixture in water and in the presence of e.g., a surfactant that includes various anionic, nonionic and cationic emulsifiers followed by polymerizing with stirring (col. 4, lines 46-61).

Following the guidelines of Ito et al who teach the use of nonionic and cationic surfactants as equivalents in scope in polymerizations for effecting the production of copolymers similar to the copolymer of Shimada et al, it would have been obvious to the skilled artisan to use a combination of nonionic and cationic surfactants in effecting the emulsion polymerization technique used to form the copolymer of Shimada et al and with a reasonable expectation of obtaining equivalent results, i.e., a reasonable expectation of success, absent a showing of unexpected results commensurate in the scope with the claims.

It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. [T]he idea of combining them flows logically from their having been individually taught in the prior art. In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

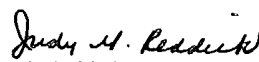
The interchangeability of one well-known nonionic surfactant for another is a matter of ordinary choice to the skilled artisan absent some evidence of unusual or unexpected results(4-6). Further, the generic teaching of the cationic surfactant per Ito et al necessarily implies that any surfactant, including the claimed cationic surfactant (7), would have been operable within the scope of patentees invention and with a reasonable expectation of success.


Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy M. Reddick whose telephone number is (571)272-1110. The examiner can normally be reached on Monday-Friday, 6:30 a.m.-3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Judy M. Reddick
Primary Examiner
Art Unit 1713

JMR 
09/10/04